

ABSTRACT

OF THE DISCLOSURE

5 Two classes of polypeptides derived from human IgE are described. One class binds selectively to the high affinity IgE receptor on mast cells and basophils, but not to the low affinity IgE receptor on B cells, monocytes, eosinophils

The present invention describes IgE antagonists (including variant anti-IgE antibodies) and their use in diagnosis, therapy or prophylaxis of allergic and platelets.

10 The other class binds to the low affinity receptor, but not the high affinity receptor. The differential binding polypeptides of this invention are useful in diagnostic procedures for IgE receptors or in the therapy of IgE-mediated disorders, including asthma, food allergies, hypersensitivity and anaphylactic reactions. such as allergies. They also are useful in preparing antibodies capable of binding regions
15 of IgE that participate in receptor binding.

20 \hat{a} -strand A loop AB \hat{a} -strand B

360 X D S N P R G V S A Y L S R P S P F D X L F I R K S P T I T
1,7-8

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loop BC \hat{a} -strand C loop CD

390 C L V V D L A P S K G T V N L T W S R X A S X X G K P V N H
2-9-3

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\hat{a} -strand D loop DE \hat{a} -strand E loop EF

420 S T R K E E K Q R X N X X G T L T V T S T L P V G T R D W I
6-10-4

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~~â strand F loop FC â strand G~~

~~450 E C E T Y Q C R V T H P H L P R A L X M R S T T K T S G P~~

~~5 11 5 12~~

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~~FIGURE 1~~

~~MaE11-Light-Chain~~

DIVLTQSPASLAVSLGQRATISCKASQSVDDYDGDSYMNWYQQKPGQPPILLIYAASYLG
SEIPARFSGSGSGTDFTLNHPVEEEDAATFYCQQSHEDPYTFGAGTKLEIK

5

~~MaE11-Heavy-Chain~~

DVQLQESGPGCLVKPSQSLSLACSVTCYSITSGYSWNWIRQFPGNKLEWMGSITYDGSS
NYNPSLKNRISVTRDTSQNQFFLKLNSATAEDTATYYCARGSHYFGHWHFAVWGAGTTVT
VSSAKTTPPSVYPLAR

10

~~Mae13-Light-Chain~~

VDDIVMTQSQKFMSTSVGDRVSVTECKASQNVSSNVAWYQQKPGQSPKALIYSASYRYS
PDRFTGSGSGTDFTLTISNVQSEDLAEYFCQQYYTYPLYTFGGGTKLEIKRADAAPT
VSI
FPPSTR

15

~~Mae13-Heavy-Chain~~

VDDVQLQESGPGCLVKPSQSLSLTCTVTGYSITSDNAWNWIRQFPGNKLEWMGYINHS
GTT
SYNPSLKSRISITRDTSKNQFFLQLNSVTTEDTATYYCAWVAVAYAMDYWGQGT
SVTVSSA
KTTPPSVYPLAR

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~~Mae15-Light-Chain~~

DIQLTQSPASLAVSLGQRATISCKASQSVDDYDGDSYMNWYQQKPGQPPKLLIYAASN
LES
GIPARFSGSGSGTDFTLNHPVEEEDAATYYCQQSNEDPFTFGAGT

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~~Mae15-Heavy-Chain~~

VDDVQHQESEPDLVKPSQSLSLTCTVTGYSITSGYNRHWIRQFPGNKLEWMGYIHYS
GST
NYNPSLKRRISITRDTSKNQFFLQLNSVTTEDTATYYCARGSIYYYGSRYRYFDV
WGAGT
TVTVSSAKRHPHLSIHWP

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FIGURE 2

5 ~~Humanized MaE11 Version 1 (intact IgG)~~

~~Heavy Chain~~

EVQLVESGGGLVQPGGSLRLSCAIVSGYSITSGYSWNWIRQAPCKGLEWVASITYDGSSTNY
ADSVKGRFTISRDDSKNTFYLQMNSLRAEDTAVYYCARGSHYFGHWHFAVWGQGTLVTVS
10 SASTKGKGPSVFPPLAPSSKSTSGGTAAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPEL
LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE
QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS
REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDK
15 SRWQQCQNVFSCSVMHREALHNHYTQKSLSLSPCK

~~Light Chain~~

DIQLTQSPSSLSASVCGDRVITTCRASQSVDDYDGDSYMNWYQQKPKAPKLLIYAASYLE
20 GVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSHEDPYTFGQGTKVEIKRTVAAPSVF
IFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLS
STLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

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~~FIGURE 3~~